

C. Remarks

Upon entry of the amendments, claims 1-4, 10-14, 16, 18, 19, 25, 26, 38, 39 and 42-44 will be pending in the application. Claims 40 and 41 have been canceled without prejudice or disclaimer.

Claims 1, 4 and 13 have been amended to more clearly define the present invention. Specifically, claim 1 has been amended to delete "a polynucleotide encoding a polypeptide having a sequence that is at least 75% homologous to SEQ ID NO:2", to recite that the polynucleotide hybridizes under the specified conditions to a sequence complementary to SEQ ID NO:1 and to recite that the immune response is in a mammal. Claim 4 has been amended to delete the term "functional fragment" and recite a "polypeptide comprising the amino acid sequence of SEQ ID NO: 2." Claim 13 has been amended to properly depend from claim 12. Support for these amendments can be found at specification page 14, line 15 - page 15, line 13. No new matter has been added by these present amendments.

DRAWINGS

Applicants acknowledge that the formal drawings submitted in compliance with 37 C.F.R. § 1.84 in Paper No. 17 have been approved by the Draftsperson.

CLAIM OBJECTIONS

The Examiner has objected to line 9 of claim 1 for reciting "by said mammal", line 5 of claim 1 for reciting "to SEQ ID NO:2" and line 4 of claim 1 for reciting "polypeptide having a sequence." With respect to lines 4 and 5, Applicants have amended claim 1 to delete reference to SEQ ID NO:2. With respect to line 9, Applicants have amended claim 1 to recite "in said mammal" as suggested by the Examiner.

The Examiner has also objected to line 2 of claims 40 and 41 for reciting "homologous to SEQ ID NO:2." Applicants have herein cancelled claims 40 and 41.

Accordingly, Applicants respectfully request withdrawal of the present objections.

THE 35 U.S.C. §112, FIRST PARAGRAPH REJECTIONS

The Examiner has rejected claims 1-4, 10-14, 16, 18, 19, 25, 26 and 38-44 under 35 U.S.C. §112, first paragraph, asserting that the specification does not reasonably provide enablement for isolated polynucleotides encoding polypeptides which are at least 75%, 80% or 90% homologous to SEQ ID NO:2 and functional fragments thereof. The Examiner asserts *inter alia* that although one skilled in the art may be able to determine a polynucleotide that encodes a polypeptide that is at least 75%, 80% or 90% homologous to SEQ ID NO:2 there is

no guarantee that such polynucleotides would retain immunogenic functions and would induce an immune response in a mammal against a strain of *Chlamydia* (Office Action at pages 3-4).

Applicants traverse. The rejection is moot with respect to cancelled claims 40 and 41. Claim 1 has been amended to delete "a polynucleotide encoding a polypeptide having a sequence that is at least 75% homologous to SEQ ID NO:2." Claim 1, as amended herein, is drawn to an isolated polynucleotide from a strain of *Chlamydia* selected from the group consisting of a polynucleotide comprising the nucleotide sequence of SEQ ID NO:1; and a polynucleotide which hybridizes under stringent hybridizing conditions of 6xSSC containing 50% formamide at 42°C with a polynucleotide that has a complementary sequence to SEQ ID NO:1, wherein said isolated polynucleotide, when administered in an immunogenically-effective amount to a mammal, induces a immune response in said mammal against *Chlamydia*. Claim 4 has been amended to delete the term "functional fragment."

Applicants respectfully submit that any person skilled in the art would be able to make and use the invention commensurate in scope with amended claim 1.¹ The claims are only drawn to those polynucleotides which either comprise the nucleotide sequence of SEQ ID NO: 1, or those which hybridize to SEQ ID NO: 1 under the clearly delineated stringent hybridizing conditions, and which induce the specified immune response. One of ordinary skill in the art is familiar with nucleotide hybridization techniques, such as those clearly laid out in Applicant's specification at pages 14 and 15; and standard immunology procedures for determining and detecting immune response to are also well-known and routine. Such routine determinations by one of ordinary skill in the art do not constitute undue experimentation. Applicants respectfully submit that since the specification provides clear guidance as to what polynucleotides are claimed and their functional characteristics, that the subject matter of claims 1-4, 10-14, 16, 18, 19, 25, 26, 38, 39 and 42-44 are fully enabled.

In view of the above arguments and amendments, therefore, Applicants respectfully request favorable reconsideration and withdrawal of the rejection under 35 U.S.C. §112, first paragraph.

THE 35 U.S.C. §112, SECOND PARAGRAPH REJECTIONS

The Examiner has rejected claims 1-4, 10-14, 16, 18, 19, 25, 26 and 38-44 under 35 U.S.C. §112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which Applicants regard as the invention. The Examiner states that claim 1 is redundant for reciting "polynucleotide comprising a polynucleotide" and

¹ The determination of Claims 2-4 and 10-15 depend from or contain all the limitations of claim 1. As such, the subject matter of the dependent claims are likewise patentable under 35 U.S.C. §112, first paragraph.

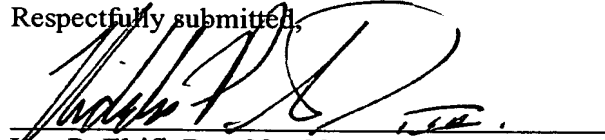
claims 40 and 41 are vague and indefinite for reciting "polypeptide having a sequence" (Office Action at page 4).

Applicants traverse. The rejection is moot with respect to cancelled claims 40 and 41. Claim 1 has been amended to delete "polynucleotide comprising a polynucleotide" and recite the "isolated polynucleotide." Claims 2-4, 10-14, 16, 18, 19, 25, 26, 38, 39 and 42-44 depend, directly or indirectly, from claim 1 and necessarily contain all the limitations of claim 1. Therefore, Applicants respectfully request reconsideration and withdrawal of the present rejection.

SUMMARY

On the basis of the foregoing amendments and remarks, Applicants respectfully submit that the pending claims are in condition for allowance. If there are any questions regarding these amendments and remarks, the Examiner is encouraged to contact the undersigned at the telephone number provided below.

Respectfully submitted,



Ivor R. Elrifi, Reg. No. 39,529

Nicholas P. Triano III, Reg. No. 36,397

Matthew Pavao, Ph.D. Reg. No. 50,572

Attorneys/Agent for Applicant(s)

MINTZ, LEVIN, COHN, FERRIS,

GLOVSKY and POPEO, P.C.

One Financial Center

Boston, Massachusetts 02111

Tel: (617) 542-6000

Fax: (617) 542-2241

Customer Number 30623

Dated: April 3, 2003

TRA 1781357v1